

Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

Claim 1 (currently amended): A method for increasing the level of a therapeutic gene product in a subject, the method comprising administering to said subject

(a) a first viral vector comprising a therapeutic nucleic acid encoding said therapeutic gene product, wherein said therapeutic gene product is expressed through operable linkage of said nucleic acid to a promoter, which functions in hepatocytes, and

(b) an agent that reduces Kupffer cell function, wherein said agent is a second viral vector that does not comprise said therapeutic nucleic acid;

wherein said second viral vector is the same type as said first viral vector;

wherein said agent is administered less than 24 hours prior to or concurrently with administration of said first viral vector;

wherein said first viral vector and said agent are not conjugated;

wherein said agent is administered by a route selected from the group consisting of direct administration to the liver, intravenous administration, or intraperitoneal administration;

wherein said first viral vector and said agent reach the liver following administration; and

wherein levels of said therapeutic gene product are increased in hepatocytes by administration of said agent.

Claims 2-33 (canceled).

Claim 34 (currently amended): A method for increasing the level of a therapeutic gene product in a subject, the method comprising administering to said subject

(a) a first viral vector comprising a therapeutic nucleic acid encoding said therapeutic gene product, wherein said therapeutic gene product is expressed through operable linkage of said nucleic acid to a promoter, which functions in hepatocytes, and

(b) an agent that reduces Kupffer cell function, wherein said agent is a second viral vector;

wherein said second viral vector is the same type as said first viral vector;

wherein said agent is administered prior to, but less than 1 hour prior to, administering said first viral vector;

wherein said agent is administered by a route selected from the group consisting of direct administration to the liver, intravenous administration, or intraperitoneal administration;

wherein said first viral vector and said agent reach the liver following administration; and

wherein levels of said therapeutic gene product are increased in hepatocytes by administration of said agent.

Claim 35 (previously presented): The method according to claim 34, wherein said agent is administered less than five minutes prior to administering said first viral vector.

Claim 36-37 (canceled).

Claim 38 (previously presented): The method according to claim 1, wherein said first and second viral vectors are adenovirus vectors.

Claim 39 (previously presented): The method according to any one of claims 34-35, wherein said first and second viral vectors are adenovirus vectors.

Claim 40 (canceled).

Claim 41 (previously presented): The method according to any one of claims 1, 34-35, or 38, wherein said subject is a primate.

Claim 42 (previously presented): The method according to claim 41, wherein said primate is a human.

Claim 43 (canceled).

Claim 44 (previously presented): The method according to any one of claims 1 or 34-35, wherein said first viral vector is administered by a route selected from the group consisting of oral administration, nasal administration, parenteral administration, transdermal administration, intrabronchial administration, intraperitoneal administration, direct injection into cells, tissue, organ or tumor, intravenous administration, subcutaneous administration, and intramuscular administration.

Claim 45 (canceled).

Claim 46 (previously presented): The method according to any one of claims 1 or 34-35, wherein said first and second viral vectors are replication-defective viral vectors.

Claim 47-51 (canceled).

Claim 52 (currently amended): A pharmaceutical composition comprising

(a) a first viral vector, wherein said vector comprises a therapeutic nucleic acid encoding a therapeutic gene product expressed through operable linkage of said nucleic acid to a promoter, which functions in hepatocytes,

(b) an agent that reduces Kupffer cell function, wherein said agent is a second viral vector that does not comprise said therapeutic nucleic acid,

wherein said second viral vector is the same type as said first viral vector;
and

(c) a pharmaceutically acceptable carrier;

wherein said first viral vector and said agent are not conjugated; and

wherein said first and second viral vectors are provided in viral particles.

Claims 53-54 (canceled).

Claim 55 (previously presented): The pharmaceutical composition according to claim 52, wherein said first and second viral vectors are adenovirus vectors.

Claim 56 (previously presented): The method according to claim 1, wherein said agent is administered less than 24 hours prior to administration of said first viral vector.

Claim 57 (previously presented): The method according to claim 1, wherein said agent is administered concurrently with administration of said first viral vector.

Claim 58 (currently amended): A method for increasing the level of a therapeutic gene product in a subject, the method comprising administering to said subject

(a) a first viral vector comprising a therapeutic nucleic acid encoding said therapeutic gene product, wherein said therapeutic gene product is expressed through operable linkage of said nucleic acid to a promoter, which functions in hepatocytes, and

(b) an agent that reduces Kupffer cell function, wherein said agent is a liposome-encapsulated cytotoxin;

wherein said agent is administered less than 24 hours prior to or concurrently with administration of said first viral vector;

wherein said first viral vector and said agent are not conjugated;

wherein said agent is administered by a route selected from the group consisting of direct administration to the liver, intravenous administration, or intraperitoneal administration;

wherein said first viral vector and said agent reach the liver following administration; and

wherein levels of said therapeutic gene product are increased in hepatocytes by administration of said agent.

Claim 59 (previously presented): The method according to claim 58, wherein said agent is administered less than one hour prior to administering said first viral vector.

Claim 60 (previously presented): The method according to claim 58, wherein said first viral vector is an adenovirus vector.

Claim 61 (previously presented): The method according to claim 58, wherein said subject is a primate.

Claim 62 (previously presented): The method according to claim 61, wherein said primate is a human.

Claim 63 (previously presented): The method according to claim 58, wherein said first viral vector is administered by a route selected from the group consisting of oral administration, nasal administration, parenteral administration, transdermal

administration, intrabronchial administration, intraperitoneal administration, direct injection into cells, tissue, organ or tumor, intravenous administration, subcutaneous administration, and intramuscular administration.

Claim 64 (previously presented): The method according to claim 58, wherein said first viral vector is a replication-defective viral vector.

Claim 65 (previously presented): The method according to claim 58, wherein said liposome-encapsulated cytotoxin is liposome-encapsulated doxorubicin.

Claim 66 (currently amended): A pharmaceutical composition comprising
(a) a first viral vector, wherein said vector comprises a therapeutic nucleic acid encoding a therapeutic gene product expressed through operable linkage of said nucleic acid to a promoter, which functions in hepatocytes,

(b) an agent that reduces Kupffer cell function, wherein said agent is a liposome-encapsulated cytotoxin,

and

(c) a pharmaceutically acceptable carrier;

wherein said first viral vector and said agent are not conjugated.